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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,352	01/05/2004	Tukaram K. Hatwar	86982RLO	2226

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EXAMINER
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GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/751,352

Applicant(s)

HATWAR ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12-14-05; 1-5-04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "more effectively" in claim 1 is a relative term which renders the claim indefinite. The term "more effectively" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear to what other electroluminescent device the device of claim 1 is being compared.

### ***Claim Rejections - 35 USC § 102/103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hatwar (US 6,627,333).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Hatwar discloses a device comprising a light emitting layer doped with a blue light emitting material and a layer in contact with this layer doped in the yellow region of the spectrum (see abstract). The dopants read upon the "at least two different dopants" of claim 1. Hatwar further teaches "the substrate 210 of an OLED can...optionally incorporate additional layers serving additional functions such as color-filter layers to remove unwanted spectral components from the electroluminescent light (see col. 5, lines 23-28). The filters disclosed by Hatwar read upon the "color filter array" of claim 1. The Hatwar devices emit white light (see abstract). Since rubrene is used as the dopant for the layer adjacent the light emitting layer emits yellowish-red light, the dopant is deemed to emit more red light and less green light per claim 2. Since Hatwar discloses a blue dopant, the "first layer" (light emitting layer) is considered to emit in the blue region and less in the green region per claim 2. The disclosed red, blue and green filters (see col. 13, lines 64-65) are deemed to be within the spectrum ranges specified in claims 3-5, because these ranges encompass the notoriously well-known wavelengths for these colors

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according to the visible spectrum of light (see spectrum of colors as evidence). Hatwar appears to disclose all components of the EL device as claimed. In the alternative that Hatwar is not considered sufficient to anticipate the claims, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined all the required components to form a device, because Hatwar discloses all of the required elements.

6. Claims 1-16 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hatwar et al. (US 6,875,524).

The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Hatwar et al. disclose organic light-emitting diodes producing white light in which the hole transporting layer is doped with yellow and red-emitting dopants. The devices comprise a blue emitting light emitting layer (see abstract). Red, green and blue color filters are used (see abstract). The disclosed red, blue and green filters (see col. 13, lines 64-65) are deemed to be within the spectrum ranges specified in claims 3-5, because these ranges encompass the notoriously well-known wavelengths for these colors according to the visible spectrum of light (see spectrum of colors as evidence). Since both blue dopants and red dopants are disclosed, the limitations of claim 2 are considered to be met by Hatwar et al. With regard to claim 6, Hatwar et al. discloses the blue light-emitting layer includes a host material and a blue dopant (see ref.

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Claim 2). Host materials may include anthracene derivatives ADN and TBADN per claim 7 (see ref. Claim 4). Blue dopants may include perylene, perylene derivatives, distyrylbenzene derivatives, distyrylbiphenyl derivatives, and the boron derivatives of claims 10 and 11 (see ref. Claims 5, 7 and 10-12). The yellow dopant includes rubrene derivatives (see ref. Claim 17) with regard to claim 13. Red dopants include diindenoperylene compounds per claims 14 and 15 (see ref. Claims 19-20). The device further comprises an electron transporting layer with a green emitting dopant with regard to claim 16 (see ref. Claim 30).

Hatwar et al. appears to disclose all components of the EL device as claimed. In the alternative that Hatwar et al. is not considered sufficient to anticipate the claims, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined all the required components to form a device, because Hatwar et al. discloses all of the required elements.

7. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al. (US 2001/0043168). Koyama et al. discloses white light emitting organic electroluminescent display devices comprising a laminate structure of an anode, hole injection layer, hole transporting layer, light emitting layer, electron transporting layer and cathode. Light emitting layers may be doped with fluorescent pigment (see par. 8). Koyama et al. further discloses multiple light emitting layers with each emitting a color such as red, green and blue (see par. 185 and 224). Koyama et al. discloses dopant may be added to the electroluminescent layers to change the color of light emitted from the layer as desired. Dopants include compounds such as DCM1, nile red, rubrene, coumarin, TPB and quinacridone (see par. 312). Koyama et al. further includes filters corresponding to each color of pixel for improving the color emitted from each

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(see par. 319 and 320). Although Koyama et al. does not *exemplify* a device with two dopants and filters, it would have been obvious to one of ordinary skill in the art to have formed a device comprising these features, because Koyama et al. discloses all components required by the claims.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-5 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 16, 17 and 20 of U.S. Patent No. 6,627,333. Although the conflicting claims are not identical, they are not patentably distinct from each other because '333 discloses devices with at least two dopants and a plurality of filters that result in a device emitting white light.

10. Claims 1-16 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-45 of U.S. Patent No. 6,875,524. Although the conflicting claims are not identical, they are not patentably distinct from each other because '524 discloses all components of a device required by claims 1-16.

11. Claims 1-16 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-35 of copending Application No. 10/780,436. Although the conflicting claims are not identical, they are not patentably distinct from each other because '436 discloses white light devices comprising two dopants and multicolor filters.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 1-8, 10, 11, and 14-16 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 8, 10-13, 23-25, and 33-36 of copending Application No. 10/838,665. Although the conflicting claims are not



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identical, they are not patentably distinct from each other because '665 discloses white light devices comprising two dopants and multicolor filters.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

13. Claims 1-8, 10, 11, and 14-16 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 7-11, 14, 16-18, 27-30 of copending Application No. 10/869,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because '115 discloses white light devices comprising two dopants and multicolor filters.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Conclusion***


14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Dawn Garrett  
Primary Examiner  
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March 17, 2006